REMARKS

Claims 1-19 are all the claims pending in the application. Applicants amend claim 13.

Claim objections

Claim 13 is objected to because of a minor informality.

In view of the amendment to claim 13 as suggested by the Examiner submitted herewith, Applicants respectfully request the Examiner to withdraw the objection to claim 13.

With regard to claim 17, Applicants herewith submit claim 17 with a status of the claim "previously presented", and therefore respectfully request the Examiner to withdraw the objection to claim 17. Also, Applicants assume that claim 17 has been entered since the Examiner has examined and rejected this claim.

Claim rejections

Claims 1, 3, 4 and 10-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Atsushi (JP Publication No.: 2002-221950; hereinafter "Atsushi" in view of Kitagawa et al. (U.S. Publication No.: 2002/0063784; hereinafter "Kitagawa").

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Atsushi and Kitagawa further in view of Lumelsky et al. (U.S. Patent No.: 5,196,924; hereinafter "Lumelsky").

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Atsushi in view Kitagawa further in view of Pether et al. (U.S. Patent No.: 6,801,925; hereinafter, Pether).

Claims 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Atsushi and Kitagawa, in view of Lu et al. (U.S. Patent No.: 7,085,016; hereinafter "Lu").

Applicants traverse the rejection for at least the following reasons.

Claim 1

In the Amendment filed September 18, 2008, Applicants submitted that it would not have been obvious to one of ordinary skill in the art to combine the references as asserted by the Examiner. In response, the Examiner states that:

> it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Atsushi to substitute the use of a gamma correction memory, for the memory (fig. 1(10)) of Atsushi, as taught by Kitagawa in order to perform gamma correction in order to properly show shadow detail in RBG images and to avoid gradation deterioration in gray zones (Paragraph [0005] of Kitagawa). Examiner notes that gamma correction is non-linear relationship between pixel values and luminance. Gamma correction matter if you have any interest in displaying an image accurately on a display screen. Gamma correction controls the overall brightness of an image. Images which are not properly corrected can look either bleached out, or too dark. There is a suggestion to apply gamma correction to a signal, particularly after luminance may be alerted with a bit rate converter, to display an aesthetically pleasing image.

Applicants respectfully disagree with the Examiner's assertion for at least the following reasons.

In his response, the Examiner merely describes gamma correction and the purpose of the gamma correction. However, this does not provide any reason or suggestion to combine the bit converter of Atsushi with the gamma correction table of Kitagawa. That is, even if, *assuming*

arguendo, the gamma correction control of Kitagawa discloses providing correction of an image, there is still no reason or suggestion to substitute the frame memory of Atsushi and with LUT memory of Kitagawa.

For instance, Applicants submit that since Atsushi does not disclose nor remotely suggest gamma correction, shadow detail or gradation deterioration in the gray zones, one of ordinary skill in the art would not have been motivated to substitute the gamma correction memory for the frame memory 11 (fig. 1), because replacing the frame memory 11 of Atsushi and substituting it with the gamma correction memory (LUT memory) of Kitagawa will deviate from the primary function and intended use of the memory being used to store the color-reduced display data.

Further, Applicants submit that, according to Atsushi, the pseudo-gradation processing means 10 carries out the subtractive color on the R component to 4 bits, G component to 5 bits and the B component to 3 bits and produces a 12 bit data. On the other hand, Kitagawa discloses digital-signal-processing circuit that includes an LUT memory that has 11 input bits and 10 output bits. Also, Kitagawa discloses that each component of the RGB color model is provided with a separate digital-signal-processing circuit (paragraph [0038]). As such, each color component (R, G, or B) would be provided with a separate LUT memory 13. Therefore, the output of 12 bits of data including all three of the components from the pseudo-gradation processing means 10 would be incompatible with the input of 11 bit LUT memory provided separately for each color component of the RGB module.

In particular, Applicants submit that each LUT in Kitagawa is directed to a specific color component. In contrast, the output from the pseudo-gradation processing means 10 of Atsushi

that is stored in frame memory 11 includes the total bits (12 bits) of all three components (R, G, B) combined together. Therefore, since substituting the frame memory 11 that corresponds to storing the total number of bits of all three color components with a LUT memory that corresponds to one particular component, it would not have been obvious to one or ordinary skill in the art to combine the teachings of Atsushi and Kitagawa as asserted by the Examiner.

Additionally, Applicants submit that even if, *assuming arguendo*, the frame memory 11 of Atsushi is replaced with the LUT memory of Kitagawa, the resultant device would not be in a proper operable condition as asserted by the Examiner. First, as discussed above, the number of bits output from the processing means 10 of Atsushi does not match the number of input bits of the LUT memory of Kitagawa. Second, Applicants submits the frame memory of Atsushi includes all three color components together, while LUT memory is separately provided for each color component. Therefore, the color reduced display data 12 bits having the RGB components in a particular unequal relationship provided to a LUT memory directed to a single component could produce unexpected results, and could possibly render a product resultant from this combination inoperable.

In view of the above, Applicants submit that taking into account only knowledge which was with the level of ordinary skill at the time the clamed invention was made, one of ordinary skill in the art would not attempt to reconstruct the claimed features as asserted by the Examiner.

In view of the above, Applicants submit that claim 1 is allowable over the cited reference.

Claim 3, 4, 10-16, 18 and 19

Applicants submit that claims 3, 4, 10-16, 18 and 19 depend from claim 1, and therefore these claims are allowable at least by virtue of their dependency.

With regard to claim 15, Applicants submit that FIG. 1 of Atsushi does not teach or suggest that "the bit rate converter converts the M-bit input video signal corresponding to the first component independent of signals corresponding to a second and a third component of the RGB color model". To the contrary, Atsushi discloses that color reduction is preformed so that the total number of each RGB component after color reduction is G component > R component > B component. As such, Atsushi clearly shows a dependent relationship between each of the RGB component. Therefore, the Atsushi discloses dependency between each component and does not teach or suggest the bit rate converter converts the M-bit input video signal corresponding to the first component independent of signals corresponding to a second and a third component of the RGB color model.

Claim 2

Applicants submit that since Lumelsky does not cure the deficiency noted above with regard to claim 1, and since claim 2 depends from claim 1, claim 2 is allowable at least by virtue of its dependency.

Claim 5

Applicants submit that since Pether does not cure the deficiency noted above with regard to claim 1, and since claim 5 depends from claim 1, claim 5 is allowable at least by virtue of its dependency.

Claims 7 and 8

Applicants submit that since Lu does not cure the deficiency noted above with regard to claim 1, and since claims 7 and 8 depend from claim 1, claims 7 and 8 are allowable at least by virtue of their dependency.

Claim 17

With regard to claim 17, Applicants submit that Atsushi does not teach or suggest a first, second and third component processor, each having a bit rate converter and a gamma correction memory, as recited in claim 1. The Examiner asserts that the processing means 10 of Atsushi allegedly discloses all three of the separately claimed processors. Further, the Examiner asserts the component processors are not claimed separate and distinct, and paragraph [0071] of Atsushi discloses that the component processing is carried out separately inside FIG. 1. Applicants respectfully disagree with the Examiner for at least the following reasons.

First, Applicants respectfully submit that claim 17 recites a first component processor for processing a first component of an RGB color model, a second component processor for processing a second component of the RGB color model and a third component processor for processing a third component of the RGB color model. As such, claim 17 clearly recites three different processors each for processing a different component of the color model. Therefore, the Examiner's assertion that the component processors are not separately and distinctly claimed appears to be improper.

Furthermore, claim 17 claims that each of the first, second and third components processors comprise a bit rate converter and a gamma correction memory. In contrast, paragraph [0071] of Atsushi merely discloses a false gradation processing means 10 inputs an indicative

data and performs color subtraction process by false gradation processing, thus converting R component to 4 bits, G component to 5 bits and B component to 3 bits. However, this disclosure of Atsushi fails to disclose three separate processors. Also, this disclosure fails to teach or suggest each of the separate processor having a bit converter and a gamma correction unit.

Claim 6 is allowable at least by virtue of its dependency on claim 1.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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